# ATTITUDES OF GREEK PHYSICAL EDUCATION TEACHERS TOWARDS INCLUSION OF STUDENTS WITH DISABILITIES IN PHYSICAL EDUCATION CLASSES

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Over the last decade the idea of inclusion of students with disabilities and special educational needs (SEN) in general schools has become increasingly the focus of national and international policies. Inclusive education has also made enormous progress in Greece recently. The purpose of this study was to examine the attitudes of Physical Educators toward the inclusion of students with disabilities and SEN in general Physical Education (PE) classes and to compare them with those teachers who taught the course of Olympic/Paralympic Education (O/PE) as well as examine gender differences. Four hundred and ten PE teachers (200 male and 210 female) of an average age of 33.58 years from different prefectures of Greece completed a modified version of the questionnaire Attitudes toward Teaching Individuals with Physical Disabilities in Physical Education (ATIPDPE) of Kudlacek et al (2002). Two-way ANOVA was used to analyze the data. The results revealed positive attitudes of all teachers toward teaching students with disabilities and SEN in PE classes; however, there were no significant differences between those who taught different type of PE courses as well as between males and females. It is strongly suggested an ongoing assessment should examine the changes in education of students with disabilities and SEN and their inclusion in the general schools and how

Worldwide the idea of inclusion has become the most important topic in the fields of Special Education and Adapted Physical Activity. Inclusion is defined as the education of all children with disabilities (mild to severe) in regular education even if special recourses are needed to make it effective (Block & Vogler, 1994). According to Sherrill (2004), exceptions to this practice may be the population with severe to profound retardation and/or multiple disabilities that make success in the regular classroom very difficult or impossible.

Freeman and Alkin (2000) underline the negative social and academic cost of segregate special education and pinpoint the benefits of inclusion of students with disabilities and SEN in general education. Inclusion in general schools has many benefits both for students with and without disabilities. For example, Mrug and Wallander (2002) point that students with disabilities and SEN have the same possibilities and opportunities to participate as non-disabled counterparts in school and social events. Students without disabilities: learn to approach children with different characteristics (Romer & Haring, 1994), develop empathy and acceptance of individual children's differences (Lieber, Capell, Sandal, Wolfberg, Horn & Bechman, 1998), become more aware and more responsive to other children's needs (Peck, Carlson & Helmstetter, 1992), and learn more about persons with a disability (Horvat, 1990). Finally, the inclusive education gives the opportunity for the development of positive attitudes of students without disabilities toward peers with disabilities and SEN (Hall, 1994; Mrug & Wallander, 2002; Salisbury, Callucci, Palombaro & Peck, 1995).

The education related to students with disabilities and SEN within the general school system has made important progress in Greece during the past years. The passage of the new PL.3699/2008 (Greek

Government Gazette, 2008) mandating school inclusion of all children in regular classes with the offer of support services from a teacher of adapted education, who is guided by scientists working at Diagnosis and Support Centers, or in special organized and properly staffed inclusion classes in general schools. Only if the attendance is difficult or impossible due to the student's type of disability, then the special education classes would be consider as an appropriate placement for the students with disabilities. Through the new law, it is obvious that the general intention of the Ministry educational policy is the effort to make a school, which is going to be responded to individual learning interests of all students.

Another factor that has possibly affected the inclusion process in Greece is the organization of Paralympic Games of 2004 in Athens, which is a major athletic, but also educational event. The success of Paralympic Games and the enormous sensation which is obvious from the millions of spectators that watch them the last years, created the need for planning programs for Paralympic Education.

On the occasion of the organization of the Paralympic Games in Athens, a Paralympic Education kit was developed, entitled *The Paralympic Games from 1960 to 2004*, which may be used by PE teachers to plan their lesson, including students with SEN and disabilities (Evaggelinou, 2002). The major aim of this kit was to create awareness, change attitudes towards people with disability, inspire pupils with the passion and the determination of the athletes participating in Paralympic Games and educate towards a better society. The Paralympic Educational Material (PEM) consists of six units about history of Paralympic Games, their organization, Greek athletes and includes a book, cards with sport activities and games and a video tape entitled Paralympic Games about the Paralympic Sports, their rules and their athletes, aiming to teach the right to equal participation. This educational material was implemented through the OE/PE course as well as other materials that had given to OE/PE teachers. The impact of this Olympic /Paralympic Education program had on students attitudes toward inclusion of students with SEN was studied in Greece by Christopoulou (2004) and Kippers & Bouramas (2003). Results of these studies revealed positive attitudes of non-disabled students after the intervention. Panagiotou et al. (2008) found the same results studying the impact of another educational program (Paralympic School Day), but reported that this might have happened due to the implementation of the PEM in Greek primary schools.

A third step that reflects the progress of education for students with disabilities and SEN in Greece could be the integration, within the school curriculum, of a course entitled Olympic and Paralympic Education. Its purpose was to teach students the Olympic and the Paralympic values such as the respect and acceptance for individual differences, respect for the athletic achievements of athletes with a disability and the right of persons with a disability to participate in sports. The Greek Ministry of Education decided to add this course within the school curriculum in addition to regular physical education course. The program was applied in 7,400 Primary and High schools all over the country, 1000 in Cyprus and 2000 schools in other parts of the world, involving thousands boys and girls who study in Greece and abroad. In order to this gigantic program to be implemented, more than two thousand PE teachers were hired to teach in elementary and secondary pupils.

The aforementioned steps seem to be positive for the education of students with disabilities and SEN and feature the contemporary educational system of Greece. Thus, it is important to study all the factors that lead to successful inclusion of students with disabilities and SEN in general schools, as the PE teachers' attitudes.

PE teachers are invited to be prepared for the inclusion of students with disabilities and SEN in their classes. Many factors affect the success of inclusive classes, like academic preparation for the physical education teachers, support services to the students with disabilities and support for physical educators (Block, & Malloy, 1998; Kallyvas, & Reid, 2003; McGregor & Vogelsberg, 1998; Morley, Bailey, Tan, & Cooke, 2005; Sherrill, 2004). One of the most important factors contributing in successful inclusion is the attitude of physical educators toward teaching students with disabilities and SEN, as it is believed to play a significant role in explaining physical educators' actions toward teaching students with disabilities in regular classes (Folsom-Meek & Rizzo, 2002). Physical educators' attitudes affect all the perspectives of inclusion of students with disabilities and SEN in regular PE class (Sherrill, 2004, p. 225).

Tripp and Sherrill (1991) recommend using the attitude definition of Allport (1935, p.805), who describes attitude as a mental and neural state of readiness, organized through experience exerting a directive or dynamic influence upon the individuals response to all objects and situations with which it is related» and adds that "attitude is not behavior, but the precondition of it.

According to Sherrill (2004), attitude is the key to changing behaviors toward people who are different. Attitudes indicate one's fitness or predisposition to either approach or avoid something. Approaching or avoiding behaviors, in turn, evoke new attitudes about self and environment. The attitude-behavior relationship can be conceptualized as a continuous circle with change occurring in both directions. Attitudes can be defined as a person's degree of favorableness or unfavorableness with respect to a psychological object *or* evaluation of an object, concept, or behavior along a dimension of favor or disfavor, good or bad, like or dislike. Positive attitudes can greatly influence a positive approach toward sharing space and activities of children with and without disabilities (Slininger, Sherrill & Jankowski, 2000; Sherrill, 2004), as well as positive approach of teachers to teach students with disabilities and SEN (Jansma & French, 1994).

In the literature, several variables have been assessed in conjunction with the study of physical educator responses to attitude scales. Physical educators' attitudes are more likely to be positive for those teachers who have more academic preparation (Folsom-Meek & Rizzo, 2002; Kowalski & Rizzo, 1996; Block & Rizzo, 1995; Rizzo & Kirkendall, 1995), more experience in teaching students with disabilities and SEN (Block & Rizzo, 1995; Kozub & Poretta, 1998; Schmidt-Gotz et al, 1994) and higher perceived competence in teaching students with disabilities and SEN (Block & Rizzo, 1995; Kowalski & Rizzo, 1996; Rizzo & Kirkendall, 1995; Schmidt-Gotz et al, 1994). The gender and the age are also variables that influence the attitude of physical educators. Some researchers found that women have more favorable attitudes (Downs & Williams, 1994; Hutzler, Zach, & Gafni, 2005; Papadopoulou, Kokaridas, Papanikolaou, & Patsiaouras, 2004), but others found no significant gender differences (Hodge et al, 2002; Rizzo & Vispoel, 1991). DePauw and Goc Karp (1990) found that older physical educators have less positive attitudes than younger counterparts, but other studies revealed no relationship between attitudes and age of physical educators (Rizzo & Vispoel, 1991; Rizzo & Wright, 1988).

Studies about attitudes of PE teachers in Greece toward inclusion of students with disabilities in general PE classes started recently. According to Vaporidi et al (2005) the physical educators' contribution toward inclusion of students with disabilities and SEN in general classes is related to the level of knowledge that PE teachers believe they have for disabilities condition. However, in this study the encouraging fact is that the participants showed willingness to broaden their knowledge about the education of people with disabilities. Papadopoulou et al study (2004) is in agreement with the previous but also revealed the doubt of PE teachers' that inclusion could be workable, due to the lack of appropriate support services. An opposite finding of Kontou et al study (1999) revealed the positive attitudes of undergraduate students of PE toward inclusion. For female students the important factor that influences their attitudes was the perceived competence and for male students was the previous experience. All these findings give a first view of Greek PE teachers' attitudes. Rapid changes of attitudes because of several educational settings, like O/PE course in schools, and sport events, make necessary the further study of attitudes and the factors that could affect them.

The purpose of this study was to examine the attitudes of Greek PE teachers toward the inclusion of students with disabilities and SEN in PE classes and to find out whether the two genders differ in their attitudes. Another objective of the study was to compare the attitudes between the teachers who teach only PE and those who teach only O/PE.

# Method

**Participants** 

The sample was comprised by 410 physical educators (200 males, 210 females) from seven different prefectures of Greece. The mean age of the participants was 33.58 years (SD=5.91) ranging from 23 to 55 years old. Two hundred eleven (211) teachers of the sample were teaching only the PE course and a hundred ninety-nine (199) were teaching only the O/PE course.

The participants were found in their schools or in several sport conferences organized in the prefecture, where belongs their school. The prefectures were randomly selected. Face-to-face distribution was preferred, as this provided the opportunity to explain the aim of the study.

#### Measures

Two self-report questionnaires were used to assess physical educators' (a) demographic characteristics, and (b) attitudes toward teaching students with disabilities and SEN in general PE. The first questionnaire was developed by the researchers of the present study and the second was direct translation in Greek language from the original questionnaire, which is being described below.

The demographic questionnaire concluded twelve questions concerning the demographic information about these teachers (i.e age, gender), the course that they were teaching, their educational background in Adapted Physical Education (APE) and their perception about their competence in teaching students with disabilities and SEN.

A modified Greek version of the questionnaire Attitudes toward Teaching Individuals with Physical Disabilities in Physical Education (ATIPDPE) (Kudlacek et al, 2002) was used to assess PE teachers' attitudes toward the inclusion of children with disabilities and SEN in general PE. The modified ATIPDPE is comprised by ten statements and the answers were responded on a 7-point Likert-type scale, anchored by extremely likely outcome (7 points) and extremely unlikely outcome (1 point) for each item. The original ATIPDPE was accompanied by a second 7-point scale for the evaluation of outcomes, apart from likelihood. The ten statements evaluate two components: a) positive outcomes for students [e.g. Inclusion will have a positive effect on the development of personalities of students with physical disabilities (e.g. self esteem, feeling of belonging, etc.)] and b) negative outcomes for teachers and students (e.g. Including students with physical disabilities in my PE class will make teaching physical education more difficult). Content validity evidence was established by three experts and for the reliability, Cronbach's (1951) co-efficient alpha was used in order to determine the internal consistency, which was .887 for the first component, .842 for the second component and .864 for the total of ten questions.

# Procedure

The researchers gave verbal instructions prior to the completion of the questionnaire and they were present during the whole process to provide any additional information required by the teachers. No difficulties emerged in item understanding. The procedure lasted for about 15 to 20 minutes.

# Data Analysis

SPSS 16.0 was used in treatment of the data. Two-way analysis of variance (one – way ANOVA) was used twice in order to compare physical educators' attitudes between the two genders and between the teachers who teach only PE and those who teach only O/PE. The level of statistical significance was set at p<.05. Descriptive statistics were also used for the description of the sample.

# Results

# Description of the sample

The results of this study indicate that 66.8% of all the physical educators had academic preparation and 49.8% had attended Adapted Physical Activity (APA) seminars. The 39.5% had professional experience with students with disabilities and they consider that this experience was very good (46.9%) or it was satisfactory (29.7%). The PE teachers that had excellent experience in teaching students with disabilities and SEN were more (20%) than the teachers of O/PE (10%). 36.4% of the teachers believe that they didn't have good academic preparation and 34.9 believe that is satisfactory. 32.6% claimed that their competence in teaching students with disabilities and SEN isn't good and 33% that is satisfactory.

# Relationship between variables

The attitudes of all physical educators were positive toward inclusion of children with disabilities and SEN in regular PE classes (table 1).

Table 1.
titudes toward inclusion

	Min	Max	Mean	SD
Attitudes	22.00	70.00	51.69	10.36
Positive outcomes for students	6.00	42.00	35.01	6.62
Negative outcomes for teachers & students	4.00	28.00	16.68	5.81

Based on total mean scores (table 2) and ANOVA analysis (table 3), there were no significant differences in gender (p>.05). Also, there was not any statistically significant difference between PE teachers and O/PE teachers (p>.05).

Table 2.

f attitudes toward inclusion (gender and ea

Course	Gender	N	(gender and cour Mean	SD	
Olympic Education	Male	85	48.88	6.63	
	Female	114	50.89	7.43	
	Total	199	50.03	7.15	
Physical Education	Male	115	50.45	6.96	
	Female	96	50.84	6.35	
	Total	211	50.63	6.68	
Total	Mala	200	40.70	6 95	
Total	Male		49.79	6.85	
	Female	210	50.87	6.94	
	Total	410	50.34	6.91	

Table 3. Differences between gender and course

Factors	F	p	
Gender	2.21	.377	
Course	.898	.517	
Interaction	1.38	.241	

There was no significant difference, neither regarding the gender, nor between PE teachers and O/PE teachers for each component separately according to two-way ANOVA (table 4, 5, 6 & 7). This means that all participants had the same attitude about positive outcomes for students and about negative outcomes for teachers and students. According to the means in table 5, females and PE teachers tend to have more favorable attitude about positive outcomes for students. According to the means in table 7, females and O/PE teachers tend to be more positive about the negative outcomes for teachers and students.

Table 4.
Attitude-positive outcomes for students (difference between gender and course)

Factors	F	p	
Gender	042	970	
	.043	.870	
Course	.781	.539	
Interaction	3.462	.064	

Table 5.

Means of attitudes toward inclusion (gender and course)-positive outcomes for students

Course	Gender	N	Mean	SD	
Olympic Education	Male	85	35.01	6.67	
	Female	114	34.04	7.73	
	Total	199	34.46	7.29	
Physical Education	Male	115	34.87	6.34	
•	Female	96	36.34	5.20	
	Total	211	35.54	5.88	
Total	Male	200	34.93	6.46	
	Female	210	35.10	6.78	
	Total	410	35.01	6.62	

Table 6.
Attitude-negative outcomes for teachers & students (difference between gender and course)

Factors	F	p	
Gender	.217	.722	
Course	.024	.902	
Interaction	12.676	.000	

 ${\bf Table~7.}$  Means of attitudes toward inclusion (gender and course)-negative outcomes for teachers &

students								
Course	Gender	N	Mean	SD				
Olympic Education	Male	85	13.87	6.22				
• •	Female	114	16.84	5.43				
	Total	199	15.57	5.95				
Physical Education	Male	115	15.58	6.02				
·	Female	96	14.50	5.21				
	Total	211	15.09	5.67				
Total	Male	200	14.86	6.15				
	Female	210	15.77	5.44				
	Total	410	15.32	5.81				

According to two-way ANOVA (table 6) and the mean scores (table 7) for each item separately, there were no significant differences (p>.05) in gender and between PE teachers and O/PE teachers for each question separately. However, there were significant interactions in questions four F(1,408)= 10.089 and p<.05, seven F(1, 408)= 11.798 and p<.05, eight F(1, 408)=9.705 and p<.05 and ten F(1, 408)=7.192 and p<.05. Descriptive statistics revealed that regarding questions four, seven and ten, women who were teaching PE were more positive than men who were teaching PE and women who were teaching O/PE. Men who were teaching O/PE had more positive attitudes than those who were teaching PE and the women with O/PE course. Women who were teaching PE had more positive attitudes than those who were teaching PE had more positive attitudes than those who were teaching PE had more positive attitudes than those who were teaching PE had more

Table 8.
Two-way ANOVA

GENDER COURSE INTRACTION								
VIII 70								
ITEMS	F	Sig.	F	Sig.	F	Sig.		
Including students with physical disabilities in my PE class will help students without disabilities to learn to interact with persons with physical disabilities.	6.184	.243	7.438	.224	.416	.519		
2. Including students with physical disabilities in my PE class will make teaching physical education more difficult.	.239	.710	.226	.718	3.820	.051		
3. Including students with physical disabilities in my PE class will encourage students without to help others.	.212	.725	1.032	.495	1.942	.164		
Including students with physical disabilities in my PE class will make lesson planning and preparation much more difficult.	.602	.580	.037	.879	10.089	.002		
5. Including students with physical disabilities in my PE class will teach students greater tolerance.	.295	.683	.000	.998	2.170	.141		
6. Inclusion will have a positive effect on the development of personalities of students with physical disabilities (e.g. self esteem, feeling of belonging, etc.).	.264	.698	1.459	.440	3.855	.050		
7. Students with physical disabilities will experience discrimination in my regular physical education classes.	.071	.834	.039	.875	11.798	.001		
8. Students with physical disabilities will slow down instruction and progress in my PE class.	.132	.778	.018	.914	9.705	.002		
9. Inclusion will cause my students to have better knowledge about persons with disabilities.	.075	.830	1.417	.445	.625	.429		
10. Including students with physical disabilities in my PE class will teach students cooperation.	.019	.912	.244	.708	7.192	.008		

Table 9.

Mean scores for each item of the questionnaire

Mean scores for each item of the questionnaire								
	GENDER COURSE							
ITEMS	MALE		FEMALE		PHYSICAL EDUCATION		OLYMPIC/ PARALYMPIC EDUCATION	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
1. Including students with physical disabilities in my PE class will help students without disabilities to learn to interact with persons with physical disabilities.	5.50	1.50	5.70	1.27	5.71	1.32	5.49	1.46
Including students with physical disabilities in my PE class will make teaching physical education more difficult.	4.49	1.89	4.31	1.63	4.49	1.73	4.30	1.80
3. Including students with physical disabilities in my PE class will encourage students without to help others.	5.79	1.43	5.86	1.36	5.92	1.22	5.73	1.55
4. Including students with physical disabilities in my PE class will make lesson planning and preparation much more difficult.	4.33	1.82	3.09	1.64	4.19	1.69	4.03	1.80
5. Including students with physical disabilities in my PE class will teach students greater tolerance.	5.66	1.44	5.78	1.31	5.72	1.34	5.72	1.41
6. Inclusion will have a positive effect on the development of personalities of students with physical disabilities (e.g. self esteem, feeling of belonging, etc.).	5.94	1.41	5.76	1.53	6.03	1.28	5.66	1.64
7. Students with physical disabilities will experience discrimination in my regular physical education classes.	3.99	1.92	3.83	1.68	3.99	1.67	3.83	1.93
8. Students with physical disabilities will slow down instruction and progress in my PE class.	4.35	1.74	4.18	1.74	4.24	1.75	4.28	1.73
9. Inclusion will cause my students to have better knowledge about persons with disabilities.	6.04	1.30	6.05	1.36	6.10	1.17	5.98	1.48
10. Including students with physical disabilities in my PE class will teach students cooperation.	6.00	1.29	5.95	1.33	6.07	1.19	5.88	1.42

## **Discussion**

The purpose of the study was to examine the attitudes of Greek PE teachers and O/PE teachers toward the inclusion of students with disabilities and SEN in PE classes. The results of this study showed positive attitudes of physical educators toward inclusion of children with disabilities and SEN in PE classes. However, they might have doubts about inclusion, because either PE teachers or O/PE teachers had positive attitudes but not as positive as they could.

These results can be explained partially due to several changes that recently occur within the Greek Education system. For example, the passage of the PL.3699/2008 which mandates school inclusion of children with disabilities and SEN in regular classes could be a change that affected PE and O/PE teachers' attitudes. Some of the teachers who participated in this study had experience in teaching students with disabilities and SEN. The O/PE course is possibly another factor that gave information about inclusion and promoting the Olympic and Paralympic values made the PE teachers more positive toward inclusion of children with disabilities and SEN into regular PE classes. A third factor that might have an effect on attitudes is the attention of APA courses and seminars by many PE teachers. According to the international literature attitudes are more likely to be positive for those teachers who have academic preparation (Folsom-Meek & Rizzo, 2002; Kowalski & Rizzo, 1996). Finally, the organization of Athens Paralympic Games 2004 might have influenced the attitudes of the teachers, who attended the Games in stadiums or watched them from in television. Schantz and Gilbert (2001) reported that television can affect the attitudes toward athletes with disabilities. It must be noted that other studies (Schmidt-Gotz et al, 1994; Jarvis & French, 1990) also found favorable attitudes, especially when there was adequate academic preparation of physical educators (Papadopoulou 2004). Ammah and Hodge (2005) found positive attitudes, but they report that the physical educators mentioned practical barriers to inclusion, like the number of students in the class, which may cause troubles. In Greece, the study of Vaporidi et al (2005) showed positive attitudes of PE teachers toward inclusion of children with disabilities and SEN in regular PE classes just as the study of Kontou et al (1999), which showed positive attitudes of PE students.

The results of the present study are not consistent with the results of Papadopoulou et al (2004), which revealed negative attitudes. The fact that attitudes in present study are positive is encouraging because, comparing those results with this study's it is obvious that during these years there was a positive progress in attitudes of physical educators toward inclusive PE classes.

A secondary purpose of this study was the research of gender's influence in attitudes. The finding that there were no significant gender differences is consistent with some studies (Hodge et al, 2002; Kontou, et al, 1999; Rizzo & Wright, 1988), but it isn't with others (Meegan & McPhail, 2006; Hutzler et al, 2005; Downs & Williams, 1994), which found women's attitudes more positive and explain this because of societal expectations of women as caregivers. Schmidt-Gotz et al (1994) reported that there was a tendency in female respondents to show a more positive attitude, but not significant differences. However, the results of two Greek studies (Vaporidi et al, 2005; Papadopoulou et al, 2004), revealed that female physical educators are more positive to include children with disabilities and SEN in their class than men. Therefore, Hannah and Pliner (1983) reported that it appears premature to associate more positive beliefs of women and place children with disabilities and SEN with female teachers than with males.

In addition, another objective of the present study was to compare the attitudes between PE and OE/PE teachers. The results didn't reveal any differences. This is explained because the PE teachers had taken courses in adapted PE and they had been in seminars in a larger percentage than their olympic/paralympic colleagues. This result doesn't mean that the last didn't influenced by the course they taught, but the physical educators changed their attitudes to more positive toward inclusion of children with disabilities and SEN in regular PE classes. Another factor that might affect PE teachers' attitude is that they believe that they had better experience than the teachers of O/PE and we mentioned above, teachers with experience in teaching students with disabilities and SEN have more favorable attitudes.

# Conclusion

Inclusion of children with disabilities and SEN in regular PE classes represents the most important goal of Adapted Physical Activity, because this will lead children with disabilities and SEN into a more active way of life, which is going to affect not only their health, but also the development of their personalities. A successful inclusion needs preparation from teachers, support services for teachers and students, but also the positive attitudes of physical educators is a fundamental factor for successful inclusive PE classes.

Therefore, studies about attitudes of PE teachers toward inclusion of children with disabilities are important their findings should be addressed by the physical educators, the PE universities, even and the ministries that develop the PE policies. Better academic preparation should be developed to give students the skills to teach to children with disabilities in inclusive classes. In-service teachers' courses and seminars should be provided for the same reason and also affect their attitudes to more positive. These courses have to include theoretical and practical knowledge. Finally, the ministry must develop a curriculum for PE teachers about how to teach children with disabilities and SEN in inclusive PE class, so physical educators feel more capable and adequately supported. More studies about attitudes and inclusion are suggested, so we can watch the ongoing participation of children with disabilities and SEN in PE classes in regular schools.

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